

Prior Art

Fig. 1

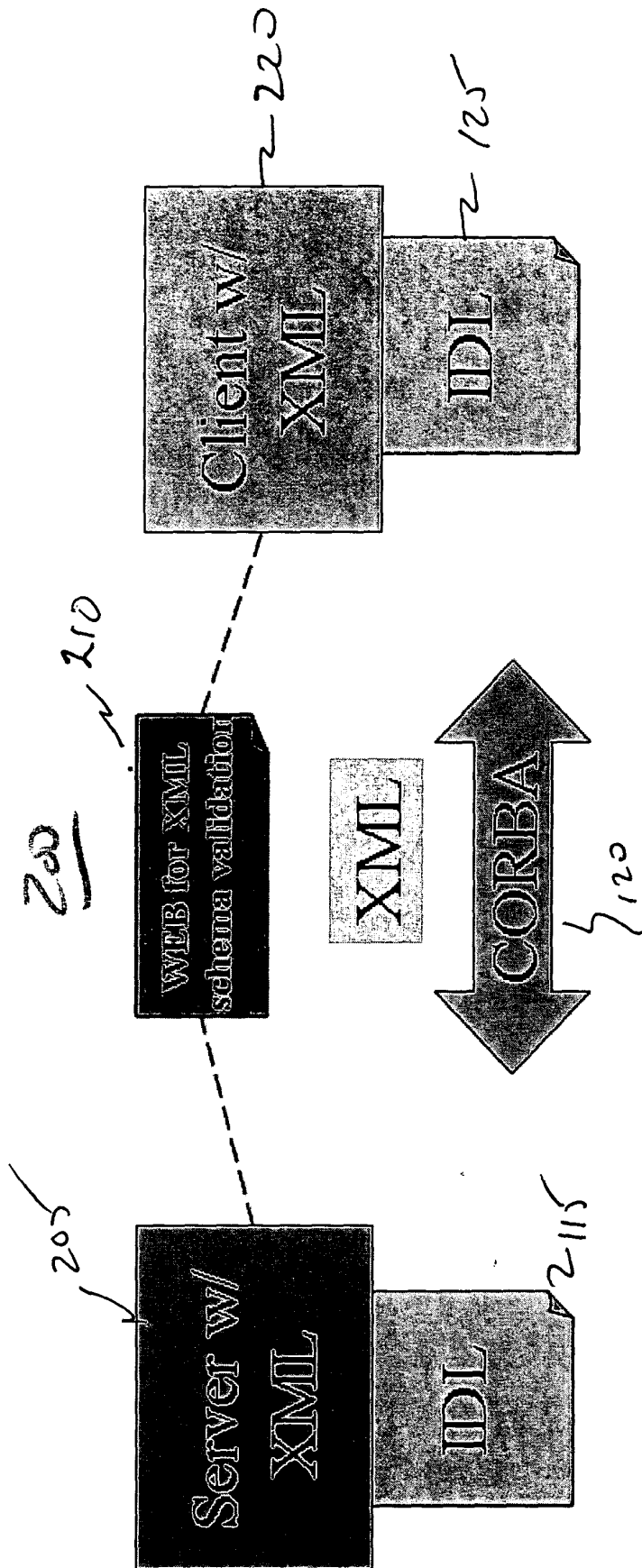
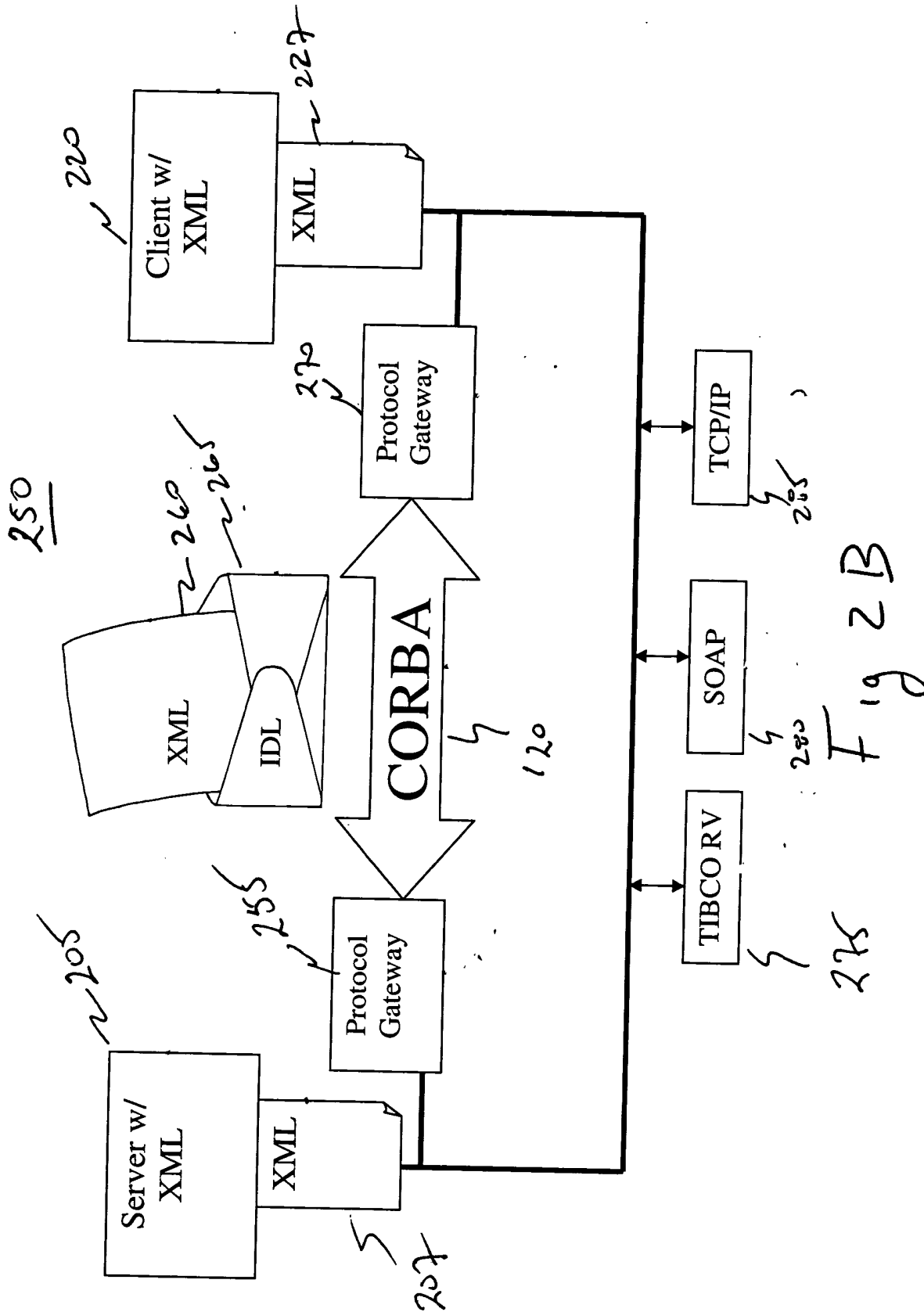


Fig. 2A



```
Module MES_Main{  
  Interface Transaction_Tempalte{  
    String SiView_Transaction(in String XML_Argv);  
  }  
}
```

Fig. 3

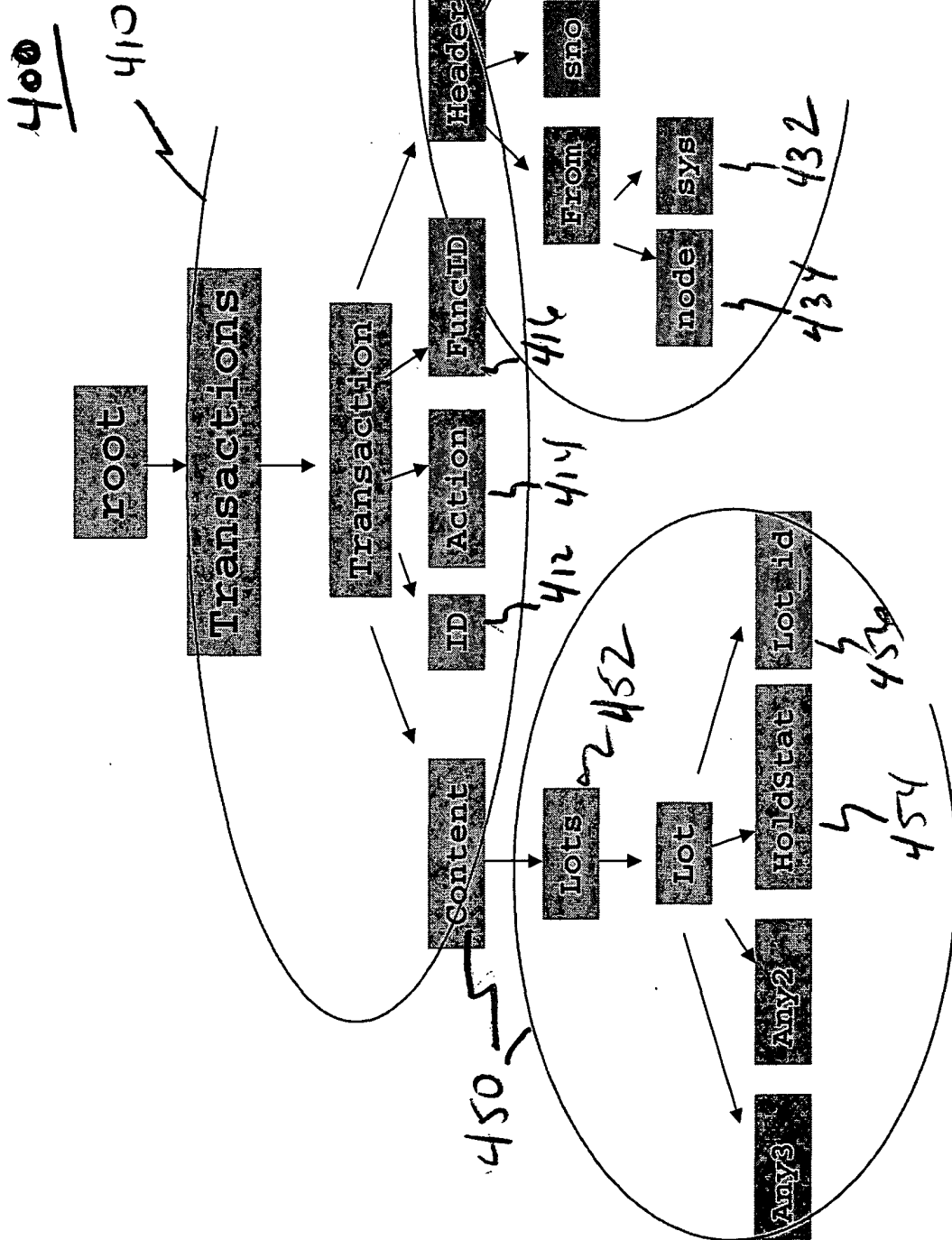


FIGURE 4

```

D:\Data sync\test\testSchema sample.txt
// define how transaction looks like line 87~101
// every transaction has 3 attributes for id name, action type = {Inquiry or ResultReply}, function id
// and 2 elements header & Contents
// these attributes are filled out by client or server

<AttributeType name="ID" required="yes" dt:type="string"/>
<AttributeType name="Action" dt:type="string" required="yes"/>
<AttributeType name="FuncID" dt:type="string" required="yes"/>
<ElementType name="Transaction" content="mixed">
  <attribute type="ID"/>
  <attribute type="Action"/>
  <attribute type="FuncID"/>
  <element type="Header"/>
  <element type="Contents"/>
</Element>

// transactions may include many transaction
<Element type="Transactions" content="eltOnly">
  <element type="Transaction"/>
</Element>

</Schema>

```

4/10

510
 512
 514

2-510
 2-512
 2-514

FIGURE 5a

```

46 //define header line 50~80
47 // Message has 2 attributes and message data
48 // 1. return code = rc
49 // 2. message id = msg_id
50 <AttributeType name="rc" required="yes" dt:type="string"/>
51 <AttributeType name="msg_id" required="yes" dt:type="string"/>
52 <ElementTypes name="Msg" content="eltOnly">
53   <attribute type="rc"/>
54   <attribute type="msg_id"/>
55 </ElementTypes>
56
57 // 2 attributes here to indicate "from which client or server node = node and system = sys"
58 <AttributeType name="node" required="yes" dt:type="string"/>
59 <AttributeType name="sys" required="yes" dt:type="string"/>
60 <ElementTypes name="From" content="eltOnly">
61   <attribute type="node"/>
62   <attribute type="sys"/>
63 </ElementTypes>
64
65 // user has password => pwd as its attribute
66 <AttributeType name="pwd" required="yes" dt:type="string"/>
67 <ElementTypes name="User" content="eltOnly">
68   <attribute type="pwd"/>
69 </ElementTypes>
70
71 //define header line 50~80
72 // header has one attribute called serial number => sno
73 // and may have 3 elements User, From & Msg=>Message
74 <AttributeType name="sno" required="yes" dt:type="string"/>
75 <ElementTypes name="Header" content="mixed">
76   <attribute type="sno"/>
77   <element type="From"/>
78   <element type="Msg"/>
79   <element type="User"/>
80 </ElementTypes>

```

FIGURE 5b

450

```
15 // define lot features line 10 ~ 38
16 // lot has one attribute named lot id for replying result to client
17 // and many other features in terms of elements
18 // ex: hold state
19
20 <AttributeType name="txt" required="yes" dt:type="string"/> 450
21 <ElementType name="HoldState" content="eltOnly" > 450
22   <attribute type="txt"/> 450
23 </ElementType>
24
25 <ElementType name="any2" content="eltOnly"> 450
26   <attribute type="txt"/> 450
27 </ElementType>
28
29 <ElementType name="any3" content="eltOnly"> 450
30   <attribute type="txt"/> 450
31 </ElementType>
32
33 // lot has one attribute named lot id for replying result to client
34 // and many other features in terms of elements
35 // ex: hold state
36 <AttributeType name="Lot_id" required="yes" dt:type="string"/>
37 <ElementType name="Lot" content="mixed">
38   <attribute type="Lot_id"/> 450
39   <element type="HoldState"/> 450
40   <element type="any2"/> 450
41   <element type="any3"/> 450
42 </ElementType>
43
44 <ElementType name="Lots" content="eltOnly"> 450
45   <element type="Lot"/> 450
46 </ElementType>
```

FIGURE 5C

600

```

1 <?xml version="1.0" ?>
2 <Transactions xmlns="x-schema:http://SomeWebServer/TestSchema.xml">
3     // transactions may include many transaction
4     // this XML has a schema file located at http://SomeWebServer
5     <Transaction id="LotInfoInq" Action="Inquiry" FuncID="0001">
6         // every transaction has 3 attributes for id name, action type = {Inquiry or ResultReply}, function id
7         // and 2 elements header & Contents
8         // these attributes are filled out by client here
9
10        <Header sno="00100">
11            // header has one attribute called serial number
12            // and 2 elements From & User
13            <From node="MyPC" sys="OMI" />
14            // 2 attributes here to indicate "from which client node = node and system = sys"
15            <User pwd="123">ABC</User>
16            // user "ABC" has password "123" as its attribute
17        </Header>
18        <Contents>
19            //contents may have many lots as it content
20            <Lots>
21                // one of its lot
22                <Lot lot_id="ABC100.00"> // lot has one attribute named lot id for client input
23                    <any2 txt="1" /> // and other necessary input argument, if any
24                    <any3 txt="2" /> // and other necessary input argument, if any
25                </Lot>
26            </Lots>
27        </Contents>
28    </Transaction>
29 </Transactions>
    
```

FIGURE 600

700

```

1  <?xml version="1.0" ?>
2  <Transactions xmlns="x-schema:http://SomeWebServer/TestSchema.xml">
3      // transactions may include many transaction
4      // this XML has a schema file located at http://SomeWebServer
5      <Transaction ID="LotInfoInqReply" Action="ResultReply" FuncID="0005">
6          // every transaction has 3 attributes for id name, action type = (Inquiry or ResultReply), function id
7          // and 2 elements header & Contents
8          // these attributes are filled out by server here
9
10         <Header sno="00101">
11             // header has one attribute called serial number
12             // and 2 elements From & Msg=Message
13             <From node="MesServer" sys="MNS" />
14             // 2 attributes here to indicate "from which server node = node and system = sys"
15             <Msg rc="0" msg_id="0001">Normal End</Msg>
16             // Message has 2 attributes and message data => here is "Normal End"
17             // 1. return code = rc
18             // 2. message id = msg_id
19         </Header>
20     </Contents>
21     // contents may have many lots as its result
22     <Lots>
23         // one of its lot information result
24         <Lot lot_id="ABC100.00">
25             // lot has one attribute named lot id for replying result to client
26             // and many other results in terms of elements
27             <HoldState txt="NotOnHold"/>
28             // for example: HoldState result with text data = "NotOnHold"
29             <any2 txt="reply stuff..." />
30             // other result, if any
31             <any3 txt="reply stuff..." />
32             // other result, if any
33         </Lot>
34     </Lots>
35 </Contents>
36 </Transaction>
    
```

Figure 7